

In re Patent Application of:

**PEARSON ET AL.**

Serial No. **09/986,479**

Filed: **11/08/2001**

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**Remarks**

Claims 1 to 17 are currently pending. Claims 1, 2, 7, 9 to 11, 16 and 17 have been rejected under 35 U.S.C. 102(e) as being anticipated by United States Published Patent Application No. 2002/0191887 (Bidnyk). Claims 3 to 6, 8 and 12 to 15 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Bidnyk alone or in view of United States Patent No. 6,826,331 (Barwiecz et al) and/or a publication entitled "Monolithic Integrated Wavelength Demultiplexer Based on a Waveguide Rowland Circle Grating in InGaAsP/InP by He et al.

The claims of the present invention define an array of divided waveguides, each of which receives a demultiplexed wavelength channel, and laterally separates the channel into first and second portions. Moreover, the claims define a detector array, which receives both the first and second portions for monitoring thereof. By monitoring both portions of the signal, the drift of the channel over time can be calculated, as well as the optical power, and the OSNR, if intermediate waveguides are provided for measuring the noise.

In the device disclosed in the Bidnyk reference, a plurality of different optical channels from the laser array 102 are combined in the AWG 210 forming a combined optical signal at A, and a portion of that signal A is tapped off at B, while the remainder of the combined signal exits the device 200 into an attached optical network. The tapped signal is demultiplexed by AWG 210, and the portions of each optical channel are sent to respective photo-detectors in array 108, providing a simple power monitor of the laser signals from the laser array 102. On the other hand, the array 205 is simply for receiving incoming channels demultiplexed from incoming signal entering the AWG 210 at separate point C, which are totally independent of the outgoing signals from the laser array 102 exiting via A and the tapped of portions from B.

Accordingly, there are no split or divided waveguides in the Bidnyk reference, as the waveguides 108 and 209 are totally separate sets of waveguides, for transmitting totally separate and distinct wavelength channels, i.e. one set 108 for transmitting tapped portions from laser signals 102, and one set 209 for transmitting incoming signals entering waveguide 254 at C. Moreover, the detector array 204 disclosed in the Bidnyk reference does not receive first and second portions of any signal, in fact, the first array 108 receives a portion of each of the

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wavelength channels from laser array 102, and the second array 205 receives the incoming wavelength channels from incoming waveguide 254, in their entirety. Accordingly, the device disclosed in the Bidnyk reference provides simple power monitoring, but is incapable of determining the drift of the wavelength channels in accordance with the present invention.

Claims 18 and 19 have been added to ensure all aspects of the invention are protected. Paragraphs 027 to 031 of the original specification disclose the details thereof. Accordingly, no new subject matter has been added.

The term "wavelength" has been replaced by the term "wavelength channel" in claims 1, 3, 12 to 14, 16 and 17 to clarify the terminology. The dependencies of claims 3, 4, and 12 to 14 have been corrected.

Typographical errors have been corrected in paragraphs 27 and 30 of the specification.

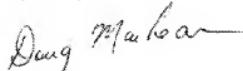
Applicant respectfully requests reconsideration of this application.

Should any minor informalities need to be addressed, the Examiner is encouraged to contact the undersigned attorney at the telephone number listed below.

**The Commissioner is hereby authorized to charge any fees which may be required, or credit any overpayment, to Deposit Account No: 50-2810.**

**Please associate this application with Customer No: 24949.**

Respectfully,



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Doug MacLean  
Regn No: 48,096

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